WHAT IS CLAIMED IS:

1.   In a system comprising a first fabric and a plurality of devices coupled to the first fabric by fibre channel connections, a method for logically organizing the devices comprising:

accessing a definition of a first configuration including at least one zone, each

zone including at least one device as a member of the zone; and

responsive to the definition of the first configuration, restricting communications

between the devices coupled to the first fabric.

2.   The method of claim 1 wherein the first configuration is an effective one of a plurality of configurations.

3.   The method of claim 1 further comprising:

storing the definition of the first configuration in a non-volatile medium; and

reinstating the first configuration after a loss of power to the first fabric.

4.   The method of claim 1 wherein the step of restricting communications between the devices includes, responsive to a first device querying for an address of a second device, returning the address of the second device only if the first and second device are members of a common zone.

5.   The method of claim 4 wherein the step of restricting communications between the devices includes, responsive to a first device querying the first fabric for a list of addresses of other devices coupled to the first fabric, returning a list of only the addresses of other devices which are in a common zone with the first device.

6.   The method of claim 5 wherein the step of restricting communications between the devices further includes, responsive to a change in the first configuration, signaling the first device to requery the first fabric for a list of addresses of other devices coupled to the first fabric.

7.   The method of claim 1 wherein the step of restricting communications between the devices includes blocking communications from a first device to a second device if the first and second devices are not members of a common zone.

8.   The method of claim 7 wherein the step of blocking communications from a first device to a second device includes:

         routing said communications from the first device through the first fabric; and

         preventing said communications from being transferred from the first fabric to the second device if the first device and the second device are not members of a common zone.

9.   The method of claim 7 wherein the step of blocking communications from a first device to a second device includes preventing said communications from being routed

through the first fabric if the first device and the second device are not members of a common zone.

10. The method of claim 7 wherein the step of blocking communications from a first device to a second device includes:

accessing a bit in a bitmap, wherein the bit in the bitmap indicates whether the first device and the second device are members of a common zone; and

blocking communications from the first device to the second device if the bit indicates that the first device and the second device are not members of a common zone.

11. The method of claim 1 wherein:

in the definition of the first configuration, at least one zone is characterized by a type of communication; and

the step of restricting communications includes restricting communications between devices which are member of said zone to said type of communication.

12. The method of claim 11 wherein the type of communication includes read-only access of devices.

13. The method of claim 11 wherein the type of communication includes a communications protocol.

14.   The method of claim 1 wherein, in the definition of the first configuration, at least one device is identified by a port on the fabric to which the device is coupled.

15.   The method of claim 1 wherein, in the definition of the first configuration, at least one device is identified by a name which is independent of the device's location on the fabric.

16.   The method of claim 15 wherein the name includes a Worldwide Port Name.

17.   The method of claim 15 wherein the name includes a Worldwide Node Name.

18.   The method of claim 1 wherein, in the definition of the first configuration, at least one device is identified by an Arbitrated Loop Physical Address.

19.   The method of claim 1 wherein:

      the step of accessing the definition of the first configuration includes:

            storing the definition of the first configuration in the first fabric, and

            the first fabric accessing the definition; and

the step of restricting communications between the devices includes, responsive to

the definition of the first configuration, the first fabric restricting

communications between the devices coupled to the first fabric.

20. The method of claim 1 wherein the first fabric comprises one or more

interconnected fabric elements to which the devices are coupled, and wherein:

the step of accessing the definition of the first configuration includes:

storing the definition of the first configuration in each fabric element, and

each fabric element accessing the definition; and

the step of restricting communications between the devices includes, responsive to

the definition of the first configuration, each fabric element restricting

communications for the devices coupled to said fabric element.

21. The method of claim 20 further including:

responsive to a coupling of an additional fabric element to the first fabric,

determining whether any definition for any configuration is stored in said

fabric element; and

responsive to no definitions being stored in the additional fabric element, storing

the definition of the first configuration in the additional fabric element.

22. The method of claim 1 wherein the first fabric comprises one or more

interconnected fabric elements to which the devices are coupled, the method further

comprising:

responsive to a coupling of an additional fabric element to the first fabric,

modifying the definition of the first configuration to account for the

additional fabric element.

23.   The method of claim 1 further comprising:

responsive to a merging of the first fabric with a second fabric, modifying the

definition of the first configuration to account for the second fabric.

24.   The method of claim 23 wherein the step of modifying the definition of the first

configuration includes:

determining whether the definition of the first configuration is compatible with

definitions for configurations for the second fabric; and

responsive to a determination of compatible configurations, propagating the first

configuration to the second fabric.

25.   The method of claim 23 wherein the step of modifying the definition of the first

configuration includes:

determining whether the definition of the first configuration is compatible with

definitions for configurations for the second fabric; and

responsive to a determination of incompatible configurations, segmenting the

second fabric from the first fabric.

26.   The method of claim 1 further comprising:

compiling the definition of the first configuration; and

wherein the step of restricting communications between the devices coupled to the

first fabric is responsive to the compiled definition of the first

configuration.

27.   A fabric element for use in a system comprising a first fabric and a plurality of

devices coupled to the first fabric by fibre channel connections, the fabric element

comprising:

a plurality of ports, each port adapted to be coupled to a device by a fibre channel

connection;

a storage medium for storing a definition of a first configuration including at least

one zone, each zone including at least one device as a member of the zone;

and

a logic device coupled to the plurality of ports and to the storage medium, for,

responsive to the definition of the first configuration, restricting

communications for devices coupled to the plurality of ports.

28.   The fabric element of claim 27 wherein the storage medium includes a non-

volatile medium.

29.   The fabric element of claim 27 wherein the logic device includes a name server

for, responsive to a first device querying for an address of a second device, returning the

address of the second device only if the first and second device are members of a

common zone.

30.   The fabric element of claim 27 wherein the logic device is further for blocking communications from a first device to a second device if the first and second devices are not members of a common zone.

31.   The fabric element of claim 30 wherein the logic device includes a bitmap having a plurality of bits, each bit indicating whether two of the devices coupled to the first fabric are members of a common zone.

32.   The fabric element of claim 27 further comprising:

a compiler coupled to the storage medium and to the logic device for compiling the definition of the first configuration for use by the logic device.

33.   A computer readable medium containing software for logically organizing a plurality of devices coupled to a first fabric by fibre channel connections, the software for instructing a processor to perform the steps of:

accessing a definition of a first configuration including at least one zone, each zone including at least one device as a member of the zone; and

responsive to the definition of the first configuration, restricting communications between the devices coupled to the first fabric.

34.   The computer readable medium of claim 33 wherein the step of restricting communications between the devices includes, responsive to a first device querying for an address of a second device, returning the address of the second device only if the first and second device are members of a common zone.

35.   The computer readable medium of claim 34 wherein the step of restricting communications between the devices includes, responsive to a first device querying the first fabric for a list of addresses of other devices coupled to the first fabric, returning a list of only the addresses of other devices which are in a common zone with the first device.

36.   The computer readable medium of claim 35 wherein the step of restricting communications between the devices further includes, responsive to a change in the first configuration, signaling the first device to requery the first fabric for a list of addresses of other devices coupled to the first fabric.

37.   The computer readable medium of claim 33 wherein the step of restricting communications between the devices includes blocking communications from a first device to a second device if the first and second devices are not members of a common zone.

38.   The computer readable medium of claim 37 wherein the step of blocking communications from a first device to a second device includes preventing said

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communications from being transferred from the first fabric to the second device if the first device and the second device are not members of a common zone.
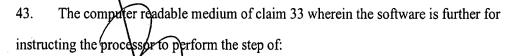
39. The computer readable medium of claim 33 wherein:

in the definition of the first configuration, at least one zone is characterized by a type of communication; and

the step of restricting communications includes restricting communications between devices which are member of said zone to said type of communication.

40. The computer readable medium of claim 33 wherein, in the definition of the first configuration, at least one device is identified by a name which is independent of the device's location on the fabric.

41. The computer readable medium of claim 33 wherein, in the definition of the first configuration, at least one device is identified by an Arbitrated Loop Physical Address.

42. The computer readable medium of claim 33 wherein the software is further for instructing the processor to perform the step of:

storing the definition of the first configuration.

43.   The computer readable medium of claim 33 wherein the software is further for instructing the processor to perform the step of:

        responsive to a merging of the first fabric with a second fabric, modifying the

                definition of the first configuration to account for the second fabric.

44.   The computer readable medium of claim 43 wherein the step of modifying the definition of the first configuration includes:

        determining whether the definition of the first configuration is compatible with

                definitions for configurations for the second fabric; and

        responsive to a determination of compatible configurations, propagating the first

                configuration to the second fabric.

45.   The computer readable medium of claim 43 wherein the step of modifying the definition of the first configuration includes:

        determining whether the definition of the first configuration is compatible with

                definitions for configurations for the second fabric; and

        responsive to a determination of incompatible configurations, segmenting the

                second fabric from the first fabric.

46.   The computer readable medium of claim 33 wherein the software is further for instructing the processor to perform the step of:

        compiling the definition of the first configuration; and

wherein the step of restricting communications between the devices coupled to the first fabric is responsive to the compiled definition of the first configuration.